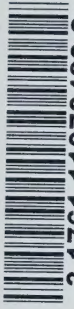


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May 7, 1970.

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Introduction

1. [6-15] Glass Container Prices

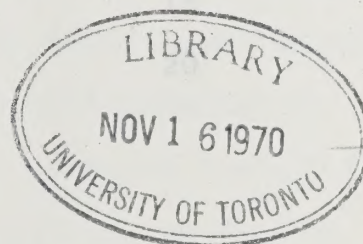
2. Financial Performance

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4. Prices

5. Manufacturing Costs

6. Conclusions



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## FOREWORD

The Prices and Incomes Commission was established on June 19, 1969, "to inquire into and report upon the causes, processes and consequences of inflation and to inform those making current price and income decisions, the general public and the Government on how price stability may best be achieved".

Following numerous separate discussions with representatives of the Canadian business community, including the Canadian Chamber of Commerce, the Canadian Manufacturers' Association, the Retail Council of Canada and the Canadian Bankers' Association, the Commission decided to call a National Conference on Price Stability in order to obtain a consensus on a national policy to combat inflation. The conference, held in Ottawa on February 9 and 10, was attended by senior officers of national business and farm associations, representatives of professional groups, leaders of the Canadian business community and officials of the federal and provincial governments. Those present indicated a willingness to exercise a meaningful degree of restraint in their pricing policies in 1970 and there was broad agreement that:







(a) Business firms generally, if called upon to do so, would reduce the number and size of price increases they would normally make in 1970.

(b) More specifically, where higher prices are needed to cover higher costs, and market conditions make them feasible, business firms generally, if called upon to do so, would ensure that price increases were clearly less than the amount needed to cover the increases in costs at a normal volume of output and sales.

The complete list of agreed criteria is contained in the Closing Statement of the National Conference on Price Stability released on February 10, 1970.

At a Federal-Provincial Conference of First Ministers, held in Ottawa on February 16 and 17, 1970, the federal government and all provincial governments endorsed the Commission's plan to call without delay upon business firms generally to follow the basic price restraint principle adopted by the National Conference on Price Stability. First Ministers urged all Canadians to co-operate actively in restraining price and income increases during 1970.



Provision was made at the National Conference on Price Stability for a price review procedure whereby the Prices and Incomes Commission would review price increases to determine whether they comply with the agreed criteria.

The Government of Canada and most provincial governments expressed the hope that government sanctions would not be required but agreed that if necessary they would use such means as are within their control to deal with cases of serious non-compliance with the pricing criteria as reported by the Commission.





## INTRODUCTION

Price increases on glass containers, to be effective February 1, 1970, were announced in December, 1969. In January, 1970, the Government of Canada undertook to ask firms planning price increases prior to the National Conference on Price Stability to postpone such increases until March 1, 1970. Glass container manufacturers complied with this request and thus contributed to the constructive atmosphere in which the national conference was held.

The two major glass container manufacturers, Consumers Glass Co. Ltd. and Dominion Glass Co. Ltd., proceeded with price increases on March 1, 1970. The Prices and Incomes Commission then undertook this review to determine whether the increases comply with the agreed criteria.

The pricing criteria are designed to be applied to the circumstances of individual firms which propose and implement price increases. To undertake a review in line with the procedures outlined at the conference, the Prices and Incomes Commission has obtained detailed information from each of the two major producers of glass containers. This information has been compiled





and studied to determine the position of each company in respect to the pricing criteria.

Information was obtained on costs, prices, markets, profits and financial performance. Accounting records were obtained for the entire glass-making and selling operations of each firm.

The criteria also stipulated that 1969 would in general be used as the base year when considering changes in costs and revenues. This matter was reviewed with the firms and it was agreed that 1969 constituted a suitable basis for comparison in both cases.

Much of the data obtained in this study is regarded as confidential by the firms supplying them. Furthermore, as only two firms are reviewed, data cannot be presented in aggregate. The Commission has endeavored, however, to present as much information on costs, prices, productivity and incomes in the glass container industry as is possible.



## GLASS CONTAINER PRICES

Glass Container Manufacturers

Glass container manufacturers are primarily engaged in the manufacture and distribution of glass containers used for packaging other products. They are best considered as part of the container and packaging industry which includes plastic, metal, and paper containers, against which glass containers must compete for a market.

Two large national firms, Dominion Glass Co. Ltd. and Consumers Glass Co. Ltd., and a small regional firm, Ahlstrom Canada Ltd., manufacture glass containers in Canada.

Dominion Glass is controlled by Power Corporation of Canada Ltd. and is the country's oldest and largest producer of glass containers. Total sales of the company in 1969 were \$70,000,000. Glass containers are the company's major product but it also produces tableware, tumblers, kitchenware, industrial glassware and some plastic products. Plants are located in Montreal, P.Q., Hamilton, Wallaceburg, and Etobicoke (plastics), Ont., Redcliff, Alta., and Burnaby, B.C. A new glass container plant is currently under construction in Bramalea, Ont., and will open in





late 1970. Dominion Glass has a commercial agreement with Owens-Illinois Inc., the largest producer of container glass in the United States, which provides access to technical knowledge and patents of that company.

Consumers Glass is also a Canadian-controlled company and has grown very rapidly in recent years. Total sales of the company in 1969 were \$45,000,000. Most of the company's revenue is attributable to glass containers but it also manufactures plastic closures. Plants are located in Ville St. Pierre and Candiac, P.Q., Toronto, Ont., and Lavington, B.C. The company has an interest in a new glass container plant being built in Australia. Brockway Glass Co. Inc. of the United States has an interest in Consumers Glass and provides the latter access to its technology and patents.

Ahlstrom Canada Ltd. is owned by Finnish interests. The firm's plant at Scoudouc, N.B., commenced operation in late 1969. Because of its recent inception, detailed information was not sought from Ahlstrom for this review.

#### Financial Performance

Detailed analyses of costs and revenues of Consumers Glass and Dominion Glass were confined to





their glass container operations. In examining the financial performance of the two firms, however, published information covering all operations of the two firms has been reviewed. These data are summarized below.

RATIO OF AFTER-TAX INCOME TO REVENUE, NET ASSETS  
and EQUITY, 1965-1969

	<u>1965*</u>	<u>1966</u>	<u>1967*</u>	<u>1968</u>	<u>1969</u>
<u>DOMINION GLASS CO. LTD.</u>					
Income After Tax (\$M)	1,630	1,658	874	1,998	2,597
- Per Cent of Revenue	3.4	3.1	1.5	3.0	3.7
- Per Cent of Net Assets	4.3	4.3	2.2	4.3	4.8
- Per Cent of Equity	5.4	5.4	2.9	6.3	7.6
<u>CONSUMERS GLASS CO. LTD.</u>					
Income After Tax (\$M)	806	1,266	1,303	1,775	2,762
- Per Cent of Revenue	4.4	5.9	4.4	4.8	6.2
- Per Cent of Net Assets	4.5	5.8	3.3	4.0	4.3
- Per Cent of Equity	11.3	14.3	13.1	15.0	12.9
- Per Cent of Equity plus Long-Term Debt	7.0	7.8	4.7	6.0	6.6



\* Consumers Glass changed from September 30 year end to December 31 year end in 1966. Period October 1 to December 31, 1965, is excluded. Dominion Glass changed from August 31 year end to December 31 year end in 1968. Period September 1 to December 31, 1967, is excluded.

Source: Annual reports of Consumers Glass Co. Ltd.  
and Dominion Glass Co. Ltd.

Both companies underwent considerable change and made large capital investments in recent years. They now appear to have modern and efficient production facilities and techniques and should be in a position to benefit from past investments.

### Markets

Glass containers are used to package beverage, food, cosmetic, pharmaceutical and chemical products. Manufacturers of these products have continuously changing packaging and marketing requirements. Glass container manufacturers must engage in frequent product innovation to meet these requirements. Major emphasis is currently being given to the manufacture of lighter and stronger containers with improved closures.

Canadian consumption of glass containers has increased at an average annual rate of some 10 per cent over the last five years. There is considerable change



in the composition of demand. Plastic and aerosol can containers have improved their position in the pharmaceutical and chemical packaging market partly at the expense of glass containers. Paper and plastic containers have largely eliminated glass containers from much of the dairy product container market. Glass containers, however, have improved their position in large segments of the food container market where transparency for consumer viewing of the contents, easy resealing and chemical inertness of the container are required. Glass containers have continued to dominate the beverage container market, in part due to the increasing use of non-returnable bottles. Current estimates of glass container shipments by end use are shown below.

#### ESTIMATED GLASS CONTAINER SHIPMENTS BY END USE

<u>End Use</u>	<u>Percentage of Total Shipments</u>
Food Containers	37.0
Non-Alcoholic Beverage Containers	27.0
Cosmetic, Pharmaceutical and Chemical Containers	13.0
Liquor Containers	11.0
Beer Containers	9.0
Wine Containers	2.6
Dairy Product Containers	<u>0.4</u>
	100.0 Per Cent

Source: Prices and Incomes Commission





Imports have typically supplied 10 to 12 per cent of Canadian glass container requirements in the last decade. These imports can be a significant factor in the Maritime market. Three reasons for imports are apparent. First, approximately one-half of imports are liquor bottles, some of which are imported by Canadian distillers for filling and re-export to the United States. Second, demand in Canada for some types of glass containers is not sufficient to warrant their production and they are imported. Third, many users of glass containers operate in both Canada and the United States. As Canada is the smaller market, some such users may purchase all their containers in the United States and import their Canadian needs.

Most imports originate in the United States. Canadian exports of glass containers have been negligible.

Glass container plants tend to be located near their intended markets. Glass is fragile and of low value in relation to its weight, thus making shipping of the finished product uneconomical over long distances.

The market for all containers may be affected in future by pollution control requirements. Disposal of the increasing quantity of glass, metal, plastic



and paper containers used is a growing problem. The Government of British Columbia recently introduced new anti-litter legislation. A feature of this legislation is that all sellers of beer, ale, carbonated beverages, and other light drinks in glass, metal or plastic containers for consumption off the seller's premises must offer a minimum two-cent refundable deposit on the container.

Such legislation brings into question the future of non-returnable glass and metal containers but enhances the future market for returnable containers.

### Prices

There are two basic types of glass container purchase. Manufacturers produce "standard stock" lines which are available to any customer at published prices. They also produce "private brand" containers for individual customers which gives them their own unique design.

Prices are quoted per gross (144) of containers. Customers generally enter into 12-month sales agreements ordering a year's requirement at one time, although shipments will be spaced over the year. Recently three-month sales agreements with a price discount feature have





come into some use as manufacturers endeavor to lower inventory and warehouse expense or pass these expenses on to the customer. Purchasers of "private brand" containers may be subject to extra charges for design and manufacture of moulds and decorating of bottles. "Standard stock" containers are packed in cartons and the purchaser is charged for the cartons. "Private brand" customers generally supply their own cartons but may be subject to charges for setting up cartons.

Prices are usually f.o.b. factory or warehouse nearest the shipping destination. Delivery is provided free in metropolitan areas surrounding plants and a discount given if the purchaser picks up his own bottles. There is some freight equalization between competitive plants.

Prices were increased on March 1, 1970. Prices were decreased to some customers but were increased by more than 20 per cent to others. The price increase faced by a customer depends on the container purchased, volume ordered and length of sales contract. The weighted average price increase calculated over all customers and all product lines is six per cent.



An index of glass container prices is not maintained in Canada. Data supplied to the Commission indicate that glass container prices have increased 25 per cent from a 1965 base to the present. Increases occur almost annually. As the current inflation has worsened, the rate of increase of glass container prices has accelerated. Prices were increased an average of four per cent in 1968, five per cent in 1969 and six per cent in 1970. In comparison, the Consumer Price Index increased 4.1 per cent from December, 1967, to December, 1968, and 4.6 per cent from December, 1968, to December, 1969. Over the same two time periods the General Wholesale Price Index rose 2.8 per cent and 4.1 per cent respectively.

Glass container prices do not appear to be governed closely by prices of substitute products. Non-price factors are important in competition between containers made of different materials. These include costs of putting contents into and sealing the container, costs of shipping and handling containers, the end use of a container's contents and consumer preference in containers.

Canadian producers of glass containers relate their prices to United States' prices plus exchange, tariff and freight costs. Since 1963, glass container



prices in the United States have steadily increased and have risen approximately 25 per cent since 1965 - equivalent to the estimated change in Canadian prices. In both 1969 and 1970, general price increases occurred in the United States. These increases were followed by general price increases of similar size in Canada.

The Canadian tariff on most categories of glass containers is 15 per cent British Preferential and 20 per cent Most Favored Nation. The tariff together with exchange and freight costs provides considerable protection to the Canadian industry.

#### Manufacturing Costs

Glass container manufacture is a continuous production process, highly automated and geared to long production runs. Raw materials, the main ones being silica sand, soda ash and limestone, are combined and melted in a furnace together with crushed glass which facilitates the melting process. Molten glass is extracted from the furnace in "gobs", each gob producing one container. Container forming involves two steps. A first mould forms the neck of the bottle and a basic blown shape from the gob. A second mould is used to blow the final shape of the bottle. After forming, containers are passed along a machine line on which they are cooled,





annealed and quality checked. Bottles are packed for distribution directly off the machine line.

This production process has been basically unchanged for years but the quality and quantity of production have improved significantly. Product quality has been improved by better materials, production controls and inspection procedures. The result is lighter, stronger containers and a reduction of manufacturing losses.

Productivity has been greatly increased through the use of "double-gobbing" which increases the output of forming machines. Production of lighter bottles enables faster processing as heavy bottles require more cooling time. Automatic inspection procedures have decreased labor requirements and improved quality control.

The size of production runs is a major determinant of costs. Each change of containers produced requires a change in moulds on the forming machines. Each change in color of glass produced requires a complete change of materials in a furnace. The Canadian market is not of sufficient size to require long runs of many individual containers. Consequently full economies of scale are not realized and there are relatively more mould changes and color changes than in the United States industry. This is the major reason for higher production costs in Canada.



Historical cost records and 1970 operating budgets were obtained from Consumers Glass and Dominion Glass. Forecast costs for 1970 were analyzed to ensure consistency with historical costs. It was found that 1970 forecasts of both companies represent a realistic assessment of likely operations, and include efficiency gains consistent with their record of recent years.

Purchased materials and energy account for some 30 per cent of manufacturing costs. The total cost of these inputs per unit of output is increasing. Laid-down costs of some materials are increasing by six to seven per cent in 1970 over 1969. Freight is a substantial component of these costs and higher freight rates account for some of the cost increases. Price increases on some purchased materials such as energy are largely offset by greater production efficiency. Despite efficiency gains, however, higher prices for purchased materials result in increased costs of approximately three per cent per unit of glass containers.

Employment costs constitute more than 40 per cent of total costs at both Consumers Glass and Dominion Glass. The increase in labor costs for hourly-rated employees in 1970 over 1969 is shown below.





## WEIGHTED AVERAGE LABOR COST PER HOUR - HOURLY RATED EMPLOYEES

CONSUMERS GLASS CO. LTD. AND DOMINION GLASS CO. LTD.

(Dollars Per Hour)

	<u>1969</u>	<u>1970</u>	<u>Per Cent Increase</u>
Pay for Time Worked	\$2.79	\$3.05	9.3
Pay for Time Not Worked (Holidays, Vacations)	<u>0.26</u>	<u>0.30</u>	<u>15.4</u>
Total Hourly Earnings	3.05	3.35	9.8
Private Welfare Plans	0.16	0.20	25.0
Compulsory Government Payments	<u>0.11</u>	<u>0.13</u>	<u>18.2</u>
Total Labor Costs Per Hour	3.32	3.68	10.8

Source: Prices and Incomes Commission

Earnings of salaried employees in the industry increase at rates similar to the increase in hourly earnings.

Wage and salary increases of this magnitude are not unusual in the current inflation and are being reflected in the cost structure of many industries. When the average growth of real output in the Canadian economy is  $2\frac{1}{2}$  per cent annually, however, wage and salary increases of more than 10 per cent are obviously much too high to be consistent with stable prices.

Crude productivity ratios can be constructed by measuring the quantity of glass produced per hour



of labor input. These ratios vary considerably from year to year due to changes in capacity utilization, machine efficiency and product mix. Average productivity gains over recent years in both firms compare favorably to national averages for all industries. Productivity gains, however, are not sufficient to offset rising employment costs which therefore are increasing per unit of output.

Total overhead expenses increase at a slower rate than volume, resulting in a lower unit cost. Overhead expenses per unit would decline even more were there not large increases in interest charges, municipal taxes and building rentals.

If price stability prevailed in the Canadian economy, efficiency and volume gains experienced by the two glass container producers would likely result in lower prices to their customers. The fact is, however, that increased costs of labor, materials and services more than offset efficiency and volume gains and costs per unit of glass containers are increasing. The customer, therefore, does not benefit from the lower price he might expect in the absence of inflation.



## Conclusions

The fundamental consideration emphasized by both businessmen and the Commission in developing the pricing criteria which emerged from the National Conference on Price Stability was that price increases should derive solely from cost increases. It was particularly emphasized that if changes in costs and revenues were only offsetting, doubts would arise as to the effectiveness of the pricing criteria in restraining the number and size of price increases. Therefore the criteria state that revenue increases must not only be offset by cost increases but they must be clearly less than cost increases. This amounts to a willingness by firms to absorb some part of cost increases in making adjustments in their prices.

The Commission found that Dominion Glass would have realized revenue increases per unit sold which were somewhat more than its expected unit cost increases in 1970. Dominion Glass, therefore, did not meet the conditions of the pricing criteria.

In order for Dominion Glass to meet the criteria it was found that the company would have to reduce its revenue increases, and hence its profits before tax,





in 1970 by about \$400,000. The Commission advised both the company and the Federal Government of this finding. Following discussions among the three parties agreement was reached on a proposal to make adjustments in some of the company's price schedules which produce the desired reductions in revenue. Consequently, Dominion Glass now clearly meets the conditions of the pricing criteria.

In the case of Consumers Glass, revenue increases are less than cost increases. Because this company is absorbing part of increased costs, the Commission is not proposing any reduction of its recent price increases.

There is no doubt that an increase in selling prices was necessary if the two companies were to offset enough of higher labor and material costs to maintain profitable operations. Increases in the cost of manufacturing glass containers and resulting price increases, however, represent increased costs to users of these containers. This places upward pressure on the price of goods packed in glass, particularly foods and beverages, which in turn serves to reinforce demands of consumers for increased income to cover higher living costs. This review is just one further example of how an entrenched inflation brings about continuously offsetting changes in prices, costs and incomes.

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